In the Claims:

1. (Previously amended) A reactor for solid phase synthesis comprising a vessel having a bottom, a filter arranged in the vessel and a filtrate outlet connected to the filter for evacuating a filtrate out of the filter, and means for delivering a gas into the vessel in a region of the vessel near the bottom of the vessel and beside the filter.

2. (Previously amended) The reactor according to claim 1, wherein the filter comprises a filter cartridge .

3. (Currently amended) ~~The reactor according to claim 2,~~ A reactor for solid phase synthesis comprising a vessel having a bottom, a filter arranged in the vessel and a filtrate outlet connected to the filter for evacuating a filtrate out of the filter, and means for delivering a gas into the vessel in a region of the vessel near the bottom of the vessel and beside the filter,
wherein the filter comprises a filter cartridge, and
wherein further the filter cartridge has an intermediate bottom that separates the filter cartridge into a lower chamber connected to the filtrate outlet and an upper chamber; and a one-way valve that connects the upper chamber with the lower chamber such that the intermediate bottom of the filter cartridge is pervious in the direction from the upper chamber to the lower chamber but not in the direction from the lower chamber to the upper chamber.

4. (Previously amended) The reactor according to claim 3, wherein the filtrate outlet comprises a gas inlet for delivering the gas into the vessel through the lower chamber of the filter cartridge.

5. (Previously amended) The reactor according to claim 1 , wherein the vessel comprises a plurality of filters .

6. (Currently amended) The reactor according to claim ~~1~~ 3, wherein the vessel comprises a double casing for temperature regulation.

7. (Previously amended) The reactor according to claim 1 , wherein the filter comprises a slotted screen filter medium.

8. (Currently amended) The reactor according to claim ~~1~~ 3, wherein the vessel comprises a filtrate inlet connected to the filtrate outlet such that the filtrate can move from the filtrate outlet via the filtrate inlet into the vessel.

9. (Currently amended) ~~The reactor according to claim 1,~~ A reactor for solid phase synthesis comprising a vessel having a bottom, a filter arranged in the vessel and a filtrate outlet connected to the filter for evacuating a filtrate out of the filter, and means for delivering a gas into the vessel in a region of the vessel near the bottom of the vessel and beside the filter, wherein the vessel comprises an exhaust connected to the means for delivering the gas such that exhausted gas can return back into the vessel.

10. (Currently amended) ~~The reactor according to claim 1,~~ A reactor for solid phase synthesis comprising a vessel having a bottom, a filter arranged in the vessel and a filtrate outlet connected to the filter for evacuating a filtrate out of the filter, and means for delivering a gas into the vessel in a region of the vessel near the bottom of the vessel and beside the filter, further comprising a cascade of vessels each comprising an exhaust, wherein each vessel is connected together in such a way that the exhaust of one vessel is connected to the means for delivering the gas of the following vessel.

11. (Canceled)